

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/580,564  
Source: FWP  
Date Processed by STIC: 6/7/06

# ***ENTERED***



IFWP

## RAW SEQUENCE LISTING

DATE: 06/07/2006

PATENT APPLICATION: US/10/580,564

TIME: 10:56:32

Input Set : A:\2923-757.txt

Output Set: N:\CRF4\06072006\J580564.raw

```

3 <110> APPLICANT: Austen, Matthias
4      Onichtchouk, Daria
5      Siegmund, Thomas
6      Aduroja, Kristin
7      Rudolph, Bettina
8      Harder, Friedrich
10 <120> TITLE OF INVENTION: Method for Preventing and Treating Diabetes Using DG119
12 <130> FILE REFERENCE: 2923-757
C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/580,564
C--> 14 <141> CURRENT FILING DATE: 2006-05-26
14 <150> PRIOR APPLICATION NUMBER: PCT/EP04/013535
15 <151> PRIOR FILING DATE: 2004-11-29
17 <150> PRIOR APPLICATION NUMBER: EP 03 027 514.3
18 <151> PRIOR FILING DATE: 2003-11-28
20 <160> NUMBER OF SEQ ID NOS: 13
22 <170> SOFTWARE: PatentIn version 3.3
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 719
26 <212> TYPE: PRT
27 <213> ORGANISM: Danio rerio
29 <400> SEQUENCE: 1
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32 1          5          10          15
35 Thr Ser Ala Ala Pro Lys Ser His Leu Arg Leu Glu Glu Lys Thr Lys
36          20          25          30
39 Asp Asn Asn Asp Thr Leu Gln Val Glu Ile Asp Asn Gln Glu His Ile
40          35          40          45
43 Leu Ser Gln Leu Leu Gly Asp Tyr Asp Lys Val Lys Ala Leu Ser Glu
44          50          55          60
47 Gly Ser Asp Cys Gly Cys Lys Cys Val Val Arg Pro Leu Ser Ala Ser
48 65          70          75          80
51 Ala Cys Gln Arg Ile Arg Glu Gly His Ala Thr Pro Gln Asp Phe Tyr
52          85          90          95
55 Thr Val Glu Thr Ile Thr Ser Gly Pro His Cys Lys Cys Ala Cys Ile
56          100         105         110
59 Ala Pro Pro Ser Ala Leu Asn Pro Cys Glu Gly Asp Phe Arg Leu Lys
60          115         120         125
63 Lys Leu Arg Gln Ala Gly Lys Asp Asn Ile Lys Leu Ser Thr Ile Leu
64          130         135         140
67 Glu Leu Leu Glu Gly Ser Phe Tyr Gly Met Asp Leu Leu Lys Leu His
68 145         150         155         160
71 Ser Val Thr Thr Lys Ile Leu Asp Arg Met Asp Thr Ile Glu Lys Met
72          165         170         175

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75 Val Leu Asn Asn Gln Thr Glu Glu Lys Leu Asn Thr Ile Ser Thr Ser
76          180          185          190
79 Pro Asn Pro Gln Leu Ser Thr Ser Ser Pro Thr Thr Leu Pro Ser Val
80          195          200          205
83 Ile Gln Glu Lys Ser Thr Ser Leu Arg Gln Gln Asn Asp Glu Ala Ala
84          210          215          220
87 Ala Phe Gln His Met Glu Ser Lys Tyr Glu Glu Lys Phe Val Gly Asp
88 225          230          235          240
91 Ile Leu Asn Ser Gly Ser Asp Leu Asn Lys Ala Thr Thr Ala Leu Gln
92          245          250          255
95 Glu Gln Glu Gln Gln Gly Arg Lys Lys Gln Pro Lys Ile Thr Val Arg
96          260          265          270
99 Gly Ile Thr Tyr Tyr Arg Ser Asp Pro Val Asp Glu Met Asp Ser Glu
100          275          280          285
103 Lys Asn Leu Lys Glu Thr Ser Ala Ser Ser Val Thr Gln Thr Gly Ala
104          290          295          300
107 Leu Ile Lys Glu His Leu Lys Ala Ser Thr Gln Ser Thr Leu Asn Thr
108 305          310          315          320
111 Leu Thr Pro Ser Pro Thr Ser His Ser Asn Ala Leu Thr Val Thr Glu
112          325          330          335
115 Ser Ser Val Gly Ile Asn Ala His Lys Gly Glu Val Thr Thr Ile Val
116          340          345          350
119 Met Thr Ala Ser Val Thr Gly Ser Lys Thr Asp Ser Val Thr Asp Leu
120          355          360          365
123 Thr Gln Leu Ser Pro Arg Val Arg Glu Thr Leu Thr Thr Thr Arg Thr
124          370          375          380
127 Thr Thr Lys Thr Ala Thr Thr Ser Gln Pro Val Lys Arg Lys Tyr Ser
128 385          390          395          400
131 Ile Ser Trp Asp Glu Glu Glu Ala Val Val Pro Glu Gln Val Glu
132          405          410          415
135 Glu Glu Lys Ala Val Lys Pro Val Val Glu Asp Lys Val Gly Glu Glu
136          420          425          430
139 Pro Gln Arg Lys Pro Gly Thr Ala His His Gln Ala Lys Thr Ile Ser
140          435          440          445
143 Thr Val Lys Gln Gln Ile Lys Phe Ser Leu Gly Met Cys Lys Asp Thr
144          450          455          460
147 Leu Ala Thr Ile Ser Glu Pro Ile Thr His Asn Thr Tyr Gly Arg Asn
148 465          470          475          480
151 Glu Gly Ala Trp Met Lys Asp Pro Leu Asp Gln Asp Asp Lys Ile Tyr
152          485          490          495
155 Val Thr Asn Tyr Tyr Tyr Gly Asn Asn Leu Leu Glu Phe Arg Asn Ile
156          500          505          510
159 Asp Val Phe Lys Gln Gly Arg Phe Thr Asn Ser Tyr Lys Leu Pro Tyr
160          515          520          525
163 Asn Trp Ile Gly Thr Gly His Val Val Tyr Lys Gly Ala Phe Tyr Tyr
164          530          535          540
167 Asn Arg Ala Phe Ser Arg Asp Ile Ile Lys Phe Asp Leu Arg Leu Arg
168 545          550          555          560
171 Tyr Val Ala Ala Trp Thr Met Leu His Asp Ala Val Phe Glu Asn Asp

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172          565          570          575
175 Asp Val Ser Ser Trp Arg Trp Arg Gly Asn Ser Asp Met Asp Leu Ala
176          580          585          590
179 Ile Asp Glu Ser Gly Leu Trp Val Ile Tyr Pro Ala Leu Asp Asp Glu
180          595          600          605
183 Gly Phe Leu Gln Glu Val Ile Val Leu Ser Arg Leu Asn Pro Thr Asp
184          610          615          620
187 Leu Ser Met Lys Arg Glu Thr Thr Trp Arg Thr Gly Leu Arg Arg Asn
188 625          630          635          640
191 Arg Tyr Gly Asn Cys Phe Ile Val Cys Gly Val Leu Tyr Ala Thr Asp
192          645          650          655
195 Ser Tyr Asn Gln Asp Thr Asn Leu Ser Tyr Ala Phe Asp Thr His
196          660          665          670
199 Thr Asn Thr Gln Val Ile Pro His Leu Pro Phe Ser Asn Asn Tyr Thr
200          675          680          685
203 Tyr Val Thr Gln Ile Asp Tyr Asn Pro Lys Glu Arg Val Leu Tyr Ala
204          690          695          700
207 Trp Asp Asn Gly His Gln Val Thr Tyr Asn Val Gln Phe Ala Tyr
208 705          710          715
211 <210> SEQ ID NO: 2
212 <211> LENGTH: 594
213 <212> TYPE: PRT
214 <213> ORGANISM: Danio rerio
217 <220> FEATURE:
218 <221> NAME/KEY: misc_feature
219 <222> LOCATION: (198)..(198)
220 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
222 <400> SEQUENCE: 2
224 Met Gly Leu Leu Tyr Ile Phe Cys Cys Val Phe Cys Leu Thr Arg
225 1          5          10          15
228 Ala Asn Val Glu Gln Gln Ala Thr Asp Asn Thr Asp Asn Arg Ala Thr
229          20          25          30
232 Leu Glu Asp Glu Met Asp Asn Gln Glu Asn Ile Leu Thr Gln Leu Ile
233          35          40          45
236 Gly Asp Tyr Asp Lys Val Lys Thr Leu Ser Glu Gly Ser Asp Cys Gln
237          50          55          60
240 Cys Lys Cys Val Val Arg Pro Met Ser Arg Ser Ala Cys Lys Arg Ile
241 65          70          75          80
244 Glu Glu Ala Gln Ala Lys Ile Glu Asp Phe Tyr Thr Val Glu Pro Val
245          85          90          95
248 Thr Ala Gly Pro Asn Cys Lys Lys Cys Ala Cys Ile Ala Pro Pro Ser
249          100          105          110
252 Ala Leu Asn Pro Cys Glu Gly Asp Phe Arg Phe Lys Lys Leu Gln Lys
253          115          120          125
256 Thr Gly Gln Tyr Asp Ile Lys Leu Ser Asn Ile Met Asp Leu Leu Glu
257          130          135          140
260 Glu Arg Val Asp Asn Ile Glu Lys Gly Glu Lys Gln Gly Lys Gly
261 145          150          155          160
264 Ala Arg Ser Asn Gln Arg Gln Glu Lys Lys Lys Arg Leu Ser Val Val

```

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Output Set: N:\CRF4\06072006\J580564.raw

```

265          165          170          175
268 Cys Trp Ser Leu His Cys Arg Arg Thr Gln Gln Arg Leu Leu Leu Thr
269          180          185          190
W--> 272 Leu Arg Tyr Arg Cys Xaa Ser Val Leu Glu Pro Ser Leu Gln Lys Asn
273          195          200          205
276 Ala Ala Ala Ala Phe Ala His Thr Glu Val Gln Met Gln Gln Phe Ile
277          210          215          220
280 Pro Asp Gln Arg Lys Tyr Glu Glu Lys Phe Val Gly Asn Gln Gly Pro
281 225          230          235          240
284 Ser Lys Pro Val Leu Lys Lys Ser Lys Ser Glu Gly Gln Glu Glu Gln
285          245          250          255
288 His Lys Pro Ala Lys Thr Lys Ala Asp Ala Lys Asn Met Ser Leu Arg
289          260          265          270
292 Ser Met Thr Phe Tyr Lys Ala Asn Arg Met Glu Asp Ser Glu Gly Glu
293          275          280          285
296 Glu Arg Asp Leu Ile Ile Glu Asp Gln Leu His Lys Gln Gly Leu Asn
297          290          295          300
300 Thr Pro Val Thr Thr Pro Glu Ala Thr Val Thr Val Thr Gln Ser Thr
301 305          310          315          320
304 Thr Ile Asn Leu Asn Thr Gln Asn Phe Thr Thr Ala Arg Met Ser Asn
305          325          330          335
308 Val Thr Lys Gln Thr Gln Gly Gln Ser Val Lys Ala Met Met Ser Ser
309          340          345          350
312 Thr Ile Thr Thr Glu Arg Pro Thr Met Pro Thr Ser Thr Thr Ser Thr
313          355          360          365
316 Ser Thr Met Thr Pro Gly Thr Asn Thr Thr Thr Ile Ala Thr Pro Leu
317          370          375          380
320 Val Val Pro Lys Gln Leu Ala Ser Val Thr Val Gly Gln Val Ser Asn
321 385          390          395          400
324 Ser Tyr Lys Leu Pro Tyr Asn Trp Ile Gly Thr Gly His Val Val Tyr
325          405          410          415
328 Ser Gly Ser Phe Phe Tyr Asn Arg Ala Phe Ser Arg Asp Ile Ile Arg
329          420          425          430
332 Phe Asp Leu Arg Leu Arg Tyr Val Ala Ala Trp Thr Thr Leu His Asp
333          435          440          445
336 Ala Ile Leu Glu Glu Glu Glu Ala Pro Trp Thr Trp Gly Gly His Ser
337          450          455          460
340 Asp Ile Asp Phe Ser Val Asp Glu Ser Gly Leu Trp Leu Val Tyr Pro
341 465          470          475          480
344 Ala Leu Asp Asp Glu Gly Phe His Gln Glu Val Ile Ile Leu Ser Lys
345          485          490          495
348 Leu Arg Ala Ser Asp Leu Gln Lys Glu Lys Ser Trp Arg Thr Gly Leu
349          500          505          510
352 Arg Arg Asn Tyr Tyr Gly Asn Cys Phe Val Ile Cys Gly Val Leu Tyr
353          515          520          525
356 Ala Val Asp Ser Phe Glu Arg Thr His Ala Asn Ile Ser Tyr Ala Phe
357          530          535          540
360 Asp Thr His Thr His Thr Gln Met Ile Pro Arg Leu Pro Phe Ile Asn
361 545          550          555          560

```

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Input Set : A:\2923-757.txt

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364 Asn Tyr Thr Tyr Thr Thr Gln Ile Asp Tyr Asn Pro Lys Glu Arg Met
365                               565                               570                               575
368 Leu Tyr Ala Trp Asp Asn Gly His Gln Val Thr Tyr Asp Val Ile Phe
369                               580                               585                               590
372 Ala Tyr
376 <210> SEQ ID NO: 3
377 <211> LENGTH: 146
378 <212> TYPE: PRT
379 <213> ORGANISM: Danio rerio
381 <400> SEQUENCE: 3
383 Met Trp Arg Ile Val Glu Leu Val Ala Cys Leu Leu Met Met Ser Ser
384 1                               5                               10                               15
387 His Val Ser Ser Gln Ser Lys Ile Phe Gly Glu Glu Gln Val Arg Met
388                               20                               25                               30
391 Thr Ser Glu Gly Ser Asp Cys Arg Cys Lys Cys Ile Met Arg Pro Leu
392                               35                               40                               45
395 Thr Arg Asp Ala Cys Ala Arg Leu Arg Thr Gly Ser Val Arg Val Glu
396                               50                               55                               60
399 Asp Phe Tyr Thr Val Glu Thr Val Ser Ser Gly Ala Asp Cys Lys Cys
400 65                               70                               75                               80
403 Ser Cys Thr Ala Pro Pro Ser Ser Leu Asn Pro Cys Glu Asn Glu Trp
404                               85                               90                               95
407 Lys Arg Glu Lys Leu Lys Lys Gln Ala Pro Glu Leu Leu Lys Leu Gln
408                               100                              105                              110
411 Ser Met Val Asp Leu Leu Glu Gly Thr Leu Phe Ser Met Asp Leu Leu
412                               115                              120                              125
415 Lys Val His Ser Tyr Ile Asn Lys Val Val Ser Gln Met Asn Asn Leu
416                               130                              135                              140
419 Glu Glu
420 145
423 <210> SEQ ID NO: 4
424 <211> LENGTH: 287
425 <212> TYPE: PRT
426 <213> ORGANISM: Danio rerio
429 <220> FEATURE:
430 <221> NAME/KEY: misc_feature
431 <222> LOCATION: (103)..(103)
432 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
434 <400> SEQUENCE: 4
436 Met Trp Ile Tyr Ala Ser Val Leu Thr Tyr Leu Leu Leu Leu Thr Arg
437 1                               5                               10                               15
440 Asp Ala Arg Ser Leu Ser Lys Ile Phe Gly Glu Pro Glu Pro Val Lys
441                               20                               25                               30
444 Met Ile Ser Glu Gly Ser Asp Cys Arg Cys Lys Cys Val Met Arg Pro
445                               35                               40                               45
448 Leu Ser Ile Glu Ala Cys Ser Arg Leu Arg Asp Gly Ser Leu Arg Val
449                               50                               55                               60
452 Asp Asp Phe Tyr Thr Val Glu Thr Val Ser Ser Gly Ser Asp Cys Lys
453 65                               70                               75                               80

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/580,564

DATE: 06/07/2006  
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Input Set : A:\2923-757.txt  
Output Set: N:\CRF4\06072006\J580564.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; Xaa Pos. 198  
Seq#:4; Xaa Pos. 103

VERIFICATION SUMMARY

DATE: 06/07/2006

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TIME: 10:56:33

Input Set : A:\2923-757.txt

Output Set: N:\CRF4\06072006\J580564.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application No

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:272 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:192

L:460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:96